Abstract of the Disclosure

A lithium ion secondary battery includes a positive electrode, a negative electrode and a thin film solid electrolyte including lithium ion conductive inorganic substance. The thin film solid electrolyte has thickness of 20μm or below and is formed directly on an electrode material or materials for the positive electrode and/or the negative electrode. The thin film solid electrolyte has lithium ion conductivity of $10^{-5}Scm^{-1}$ or over and contains lithium ion conductive inorganic substance powder in an amount of 40 weight % or over in a polymer medium. The average particle diameter of the inorganic substance powder is 0.5μm or below. According to a method for manufacturing the lithium ion secondary battery, the thin film solid electrolyte is formed by coating the lithium ion conductive inorganic substance directly on the electrode material or materials for the positive electrode and/or the negative electrode.